

Application No. 10/055,624
Amendment dated February 15, 2005
Reply to Office Action of October 1, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-26. (cancelled)

27. (currently amended) A method of screening a patient for a ~~metabolic disease~~, predisposition to obesity comprising:

measuring ~~BFIT~~-gene expression of a polynucleotide encoding a brown fat inducible thioesterase (BFIT) polypeptide comprising at least 92% amino acid sequence identity with SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6, wherein the polypeptide has thioesterase activity, in a tissue sample from the patient; and

comparing expression of the polynucleotide to a control sample, wherein decreased expression of the polynucleotide as compared to the control sample indicates a predisposition to obesity.

28. (currently amended) The method of claim 27, wherein said measuring ~~BFIT~~-gene expression of the polynucleotide comprises is measuring an amount of BFIT polypeptide.

29. (currently amended) The method of claim 27, wherein said measuring ~~BFIT~~-gene expression of the polynucleotide comprises is measuring an amount of mRNA encoding BFIT polypeptide.

30-31. (cancelled)

32. (new) A method for monitoring metabolism in a patient, comprising:

a) measuring expression of a brown fat inducible thioesterase (BFIT) polynucleotide encoding a BFIT polypeptide having at least 92% amino acid sequence with SEQ ID NO:2, SEQ

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ID NO:4, or SEQ ID NO:6, wherein the polypeptide has thioesterase activity, in a tissue sample from the patient; and

b) comparing expression of the BFIT polynucleotide to a control sample, wherein increased expression of the BFIT polynucleotide as compared to the control sample indicates an increase in metabolism and decreased expression of the BFIT polynucleotide as compared to the control sample indicates a decrease in metabolism.

33. (new) The method of claims 27 or 32, wherein the BFIT polynucleotide comprises a nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.

34. (new) The method of claims 27 or 32, wherein the BFIT polypeptide comprises at least 95% sequence identity with an amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6.

35. (new) The method of claims 27 or 32, wherein the BFIT polypeptide comprises SEQ ID NO:2 or SEQ ID NO:4.

36. (new) The method of claim 32, wherein measuring expression of a BFIT polynucleotide comprises detecting and measuring mRNA encoding a BFIT polypeptide.

37. (new) The method of claim 32, wherein measuring expression of a BFIT polynucleotide comprises detecting and measuring BFIT polypeptide.

38. (new) A method for detecting an increase in metabolism in a patient, comprising:

a) measuring expression of a brown fat inducible thioesterase (BFIT) polynucleotide encoding a BFIT polypeptide having at least 92% amino acid sequence with SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6, wherein the BFIT polypeptide has thioesterase activity, in a tissue sample from the patient; and

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b) comparing expression of the BFIT polynucleotide to a control sample, wherein increased expression of the BFIT polynucleotide as compared to the control sample indicates an increase in metabolism.

39. (new) A method for detecting a decrease in metabolism in a patient, comprising:

a) measuring expression of a brown fat inducible thioesterase (BFIT) polynucleotide encoding a BFIT polypeptide having at least 92% amino acid sequence with SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6, wherein the BFIT polypeptide has thioesterase activity, in a tissue sample from the patient; and

b) comparing expression of the BFIT polynucleotide to a control sample, wherein decreased expression of the BFIT polynucleotide as compared to the control sample indicates a decrease in metabolism.